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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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EXAMINER

JOHN LAND  
FISH & RICHARDSON  
4225 EXECUTIVE SQUARE  
SUITE 1400  
LA JOLLA CA 92037

ZHEN, W

ART UNIT	PAPER NUMBER
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2762

14

DATE MAILED:

05/17/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

<b>Office Action Summary</b>	Application No. <b>08/997,142</b>	Applicant(s) <b>Marshall A. Isman</b>
	Examiner <b>Wei Zhen</b>	Group Art Unit <b>2762</b>

Responsive to communication(s) filed on Mar 9, 2000

This action is **FINAL**.

Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle* 35 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

#### Disposition of Claim

Claim(s) 1-12 is/are pending in the application.

Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

Claim(s) \_\_\_\_\_ is/are allowed.

Claim(s) 1-12 is/are rejected.

Claim(s) \_\_\_\_\_ is/are objected to.

Claims \_\_\_\_\_ are subject to restriction or election requirement.

#### Application Papers

See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.

The proposed drawing correction, filed on \_\_\_\_\_ is  approved  disapproved.

The specification is objected to by the Examiner.

The oath or declaration is objected to by the Examiner.

#### Priority under 35 U.S.C. § 119

Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

All  Some\*  None, of the CERTIFIED copies of the priority documents have been

received.

received in Application No. (Series Code/Serial Number) \_\_\_\_\_.

received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_

Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

#### Attachment(s)

Notice of References Cited, PTO-892

Information Disclosure Statement(s), PTO-1449, Paper No(s). \_\_\_\_\_

Interview Summary, PTO-413

Notice of Draftsperson's Patent Drawing Review, PTO-948

Notice of Informal Patent Application, PTO-152

— SEE OFFICE ACTION ON THE FOLLOWING PAGES —

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments with respect to claims 1-12 have been considered but they are not persuasive.

In the remarks, the applicant argues that

I) The method outputs a description of the total execution time and performance of the system based on determined execution time and counts of data records. The result is tangible in that it is made available as an output, and is thus not ephemeral or inaccessible. Accordingly, the invention as now claimed meets the statutory subject matter tests of state street and AT&T v. Excel.

I) The claims 1-12 in the present applications are directed to non-statutory subject matter such as mathematical algorithm or an abstract idea without a practical application. The practical applications in State Street Bank & Trust Co. V. Signature Financial Group, Inc and AT&T v. Excel do not correlate to applicant's claims and they do not apply.

The present claims are directed to non-statutory subject matter because they are merely mathematical algorithm or abstract idea without limitation to practical applications and they are non-statutory. The present claims 1-12 are method claims and are a series of steps. The results of these steps are merely measurements of data and data gathering. Therefore, they are non-statutory.

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***Claim Rejections - 35 USC § 101***

2 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-12 are rejected under 35 U.S.C. § 101 because the claims are directed to non-statutory subject matter such as a mathematical algorithm or an abstract idea without a practical application.

Claim 1-6 are method claims and are a series of steps. The results of these steps are merely measurement of data and data gathering, they don't have any practical application. Treating the process that performs the recited steps indicates that it does manipulate an abstract idea without a practical application. Therefore, they are not statutory.

Claims 7-8 are computer program claims and also have a series of steps. The results of these steps are merely measurement of data and data gathering, they don't have any practical application. Treating the process that performs the recited steps indicates that it does manipulate an abstract idea without a practical application. Therefore, they are not statutory.

Claims 9-10 are computer readable storage medium claims and also have a series of steps. The results of these steps are merely measurement of data and data gathering, they don't have any practical application. Treating the process that performs the recited steps indicates that it does manipulate an abstract idea without a practical application. Therefore, they are not statutory.

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Claims 11-12 are computer program claims and also have a series of steps. The results of these steps are merely measurement of data and data gathering, they don't have any practical application. Treating the process that performs the recited steps indicates that it does manipulate an abstract idea without a practical application. Therefore, they are not statutory.

*Claim Rejections - 35 USC § 103*

3 The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Benner et al, U.S. Patent No. 5,935,216 in view of Tsuchida et al, U.S. Patent No. 5,806,059.

As per claim 1, Benner et al disclose that express the parallel processing system as a graph of vertices (Fig. 4); creating a performance description of each vertex in the graph and determining an execution time for each vertex in the graph (Fig. 3), and the description of the execution time and performance of the system is inherently output (Fig. 3).

Benner et al don't explicitly disclose size of data records and the counts of data records assigned to corresponding vertices.

However, Tsuchida et al disclose that in a parallel processing system, the processing time with each node varies with the number of data at lines 45-66 of col. 8.

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Therefore, it would have been obvious to one having ordinary skill in the art at the same time the invention was made to modify the teaching of Benner et al with the teaching of Tsuchida et al to include the analysis of size of data records and the counts of data records assigned to corresponding vertices because it provides an efficient method to analyze the performance of the parallel processing system and provides the accurate information for each of the processor in the parallel processing system.

As per claim 2, the rejection of claim 1 is incorporated and Benner et al don't explicitly disclose that the multiple input data sets are supplied for the system and the comparison of the multiple description is made.

However, Tsuchida et al discloses that in a parallel processing system, the processing time with each node varies with the number of data at lines 45-66 of col. 8.

Therefore, it would have been obvious to one having ordinary skill in the art at the same time the invention was made to modify the teaching of Benner et al with the teaching of Tsuchida et al to create multiple description of the performance of the system based on the multiple input data sets and compare the results of the multiple description because it provides an efficient and complete method to analyze the performance of the parallel processing system under different situation.

*Allowable Subject Matter*

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4       Claims 3-12 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2<sup>nd</sup> paragraph, set forth in this Office action.

As per claims 3, 5, 7, 9 and 11, the closest cited prior arts (Benner et al, U.S. Patent No. 5,935,216 and Tsuchida et al, U.S. Patent No. 5,806,059) teach express the parallel processing system as a graph of vertices and analyze the performance of each vertex in the graph with multiple input data. However, the closest cited prior arts (Benner et al, U.S. Patent No. 5,935,216 and Tsuchida et al, U.S. Patent No. 5,806,059) taken alone or in combination fail to teach the description of the vertices and links of the graph include the data processing rates and amounts of data, the performance characteristics of the application are based upon the resource requirements, and capacity of the application.

Claims 4, 6, 8, 10 and 12 depend on claims 3, 5, 7, 9 and 11 respectively and contain the same allowable subject matter as claims 3, 5, 7, 9 and 11.

### *Conclusion*

5       The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Samanta et al disclose load balancing for parallel processing system.
- Rim et al disclose dynamic load balancing on hypercube multi-processing system.
- Li et al disclose load balancing algorithm for balancing load over an entire distributed/parallel system.

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6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wei Zhen whose telephone number is (703)305-0437.

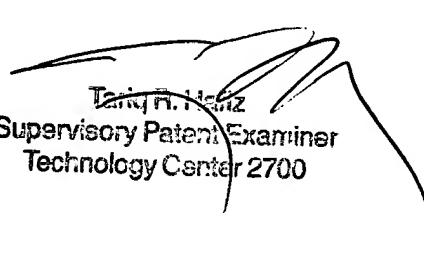
The examiner can normally be reached on Monday-Friday from 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor Tariq Hafiz can be reached at (703) 305-9643. The fax number for this group is ((703)308-5397.

Any inquiry of general nature or relating to the status of this application or proceeding should be directed to the group receptionist whose telephone number is (703)305-9600.

Wei Zhen

5/15/2000

  
Tariq H. Hafiz  
Supervisory Patent Examiner  
Technology Center 2700